During 1931–33 he was chairman of the national committee for the mobilization of human needs, organized to relieve destitution and unemployment. In 1933 he was engaged by the Rubber Manufacturers' Association to work out an operating code for the industry under the national recovery administration and he headed the arbitration board which settled the cloak and suit strike in Cleveland in 1934. Baker was president (1928–31) of the Woodrow Wilson Foundation, and a member of the National Economic League, American Society of International Law, American Judicature Society (president, 1930–37), American Bar Association, Society of the Cincinnati, Phi Gamma Delta, the City, Midday, Union, University and Country clubs of Cleveland, the Century and Town Hall clubs of New York city, and the Army and Navy and Cosmos clubs of Washington, D.C. He was a trustee of Johns Hopkins, Washington and Lee, Ohio State and Western Reserve universities and president (1922–23) of the Cleveland chamber of commerce. In religion he was an Episcopalian. Baker was a member of the Ohio state Democratic committee and, for twenty-six years, was chairman of the Cuyahoga county Democratic central committee, resigning a year before his death. While he wrote no books, four volumes, consisting of reprints of speeches or articles, were published under his name as follows: "Frontiers of Freedom" (1918), "Progress and the Constitution" (1925), "War in the Modern World" (1935) and "Why We Went to War" (1936). The honorary degree of LL.D. was conferred on him by Washington and Lee university (1916), University of North Carolina (1917), West Virginia university (1919), Western Reserve university and Oberlin college (1923), Wittenburg college (1924), Birmingham-Southern college and Dartmouth college (1928), University of Michigan and Princeton, Harvard and Yale universities (1932), Amherst college (1933), Brown university (1934), Bucknell university and Williams college (1936) and Queens college, Kingston, Ontario (1937). Baker was commissioned a colonel in the U.S. army reserve corps in 1921 and in 1929 was awarded the distinguished-service medal, an honor he had declined to accept while serving as secretary of war. As a constant crusader against creed prejudice, he won the 1930 award of the "American Hebrew" for "promotion of better understanding between Christian and Jew" and in 1933 was one of three recipients of medals conferred by the National Institute of Social Sciences for "distinguished service to humanity." Baker was small in stature, quiet, studious, scholarly, a hard campaigner and a convincing public speaker. He made friends quickly and had hosts of them in all walks of life. He remained to the end of his days a powerful, fearless defender of democratic principles and institutions, advocate of international peace, champion of the League of Nations and profound and reverent believer in the brotherhood of man. He was married at Pottstown, Pa., July 5, 1902, to Elizabeth Wells, daughter of Howard Leopold, a merchant, of that city, and they had three children: Elizabeth, who married John Phillips McGean; Newton Diehl 3d and Margaret Baker, wife of Fulton Wright. He died in Cleveland, Ohio, Dec. 25, 1937.

WATSON, Thomas Augustus, telephone pioneer and shipbuilder, was born at Salem, Mass., Jan. 18, 1854, son of Thomas Russell and Mary (Phipps) Watson. His early schooling ended when he was fourteen, after a year and two months in high school, though he later attended a Boston commercial college for six months. He began his working career when he was eleven, being variously employed while out of school, and after leaving high school he obtained a full-time position in a crockery store. On July 1, 1872, he entered the employ of Charles Williams, operating a machine shop in Boston, where he was put to work making minor parts for printing telegraph machines, and soon progressed to more difficult operations. While thus engaged he experimented in reducing the number of movements necessary to accomplish a piece of work, devised new tools to speed up manufacturing methods and improve the quality of the product, and studied all available books on electrical and mechanical subjects. He also experimented privately with steam engines and boilers, building several which he tested in the shop or at home. His growing reputation for mechanical ingenuity brought him into contact with men who had electrical ideas they wished reduced to practical form and by 1874 his time was devoted almost entirely to this work. Among these men was Alexander Graham Bell (q.v.) who was experimenting with his "harmonic telegraph," by which he expected to be able to send six to eight telegraph messages over a single wire simultaneously without interference with one another by using six to eight pairs of reed transmitters and receivers. The reeds of each transmitter were tuned to the same pitch as those of its corresponding receiver but differed from all other sets in use, the theory being that in operation each receiver would select the vibrations intended for it, ignoring all the rest, thus enabling the operator to record its message. Watson made Bell's first transmitter and receiver, which worked so well that Bell ordered six pairs of the instruments. When they were finished, however, they did not function so well, since the receivers would not always pick out the right messages. Undiscouraged, Bell continued his experiments, keeping Watson almost constantly engaged making and altering instruments and helping to test them. On June 2, 1875, while Watson was tuning one of the transmitter reeds it stopped vibrating and he plucked it with his fingers to start it going. Bell, in the next room, with a receiver reed pressed to his ear, heard the sound over the connecting electric wire. In this phenomenon Bell recognized the "sound shaped electric current" for which he had been searching to convey speech by electricity. Overjoyed by his discovery he immediately designed a crude telephone transmitter which Watson built entirely with his own hands on the following day. It consisted of a wooden frame on which was mounted one of Bell's harmonic receivers, a tightly stretched parchment drumhead to the center of which the free end of the receiver was fastened, and a mouthpiece arranged to direct the voice against the other side of the drumhead. It was designed to force the reed to follow the vibrations of the voice and so generate voice shaped electrical undulations. One of the harmonic telegraph receivers was employed as the first telephone receiver. The first test, made over a circuit which Watson constructed, was not a complete success and it was not until Mar. 10, 1876, that the enthusiastic experimenters had the telephone sufficiently developed to transmit a whole sentence intelligibly. It was spoken by Bell who, in a test of the apparatus over a wire running from his room in a Boston boarding house to his laboratory on the same floor, spilled battery acid over himself and called

to Watson for help, saying "Mr. Watson, come here, I want you." The site of the building in which these historic words were transmitted by wire was marked by an appropriately inscribed tablet erected by the Bostonian Society and the New England Telephone & Telegraph Co. in 1916. Encouraged by this triumph, the two men redoubled their efforts to improve the equipment, Watson giving up his position in the Williams machine shop and devoting his entire time to constructing instruments for Bell, in exchange for a tenth interest in the telephone patents, of which sixty were obtained by Watson alone but were assigned by him to the Bell Telephone Co. On Oct. 9, 1876, the work had progressed to the point where Bell and Watson held their first long distance telephone conversation, over a telegraph circuit between Boston and Cambridge owned by the Walworth Manufacturing Co. Improvements now followed one another in rapid succession and in 1877 the Bell Telephone Co. was formed, Watson becoming its chief engineer, and the installation of telephones for commercial use was begun on an extensive scale. During this period Bell was called upon to deliver lectures on his invention, Watson always accompanying him to assist in the demonstrations, and much of their time was consumed with patent litigation. In 1878 Watson perfected two highly important telephone accessories, namely the call bell and the automatic switch, operated by the weight of the receiver. With the major problems involved in the early development of the telephone successfully solved, Watson's attention turned more and more to other subjects in which he was interested, including geology, poetry, philosophy, psychic research, the drama, music, painting, the languages and foreign travel. He took up the study of French and higher mathematics and took lessons in singing. In 1881 he resigned as chief engineer of the National Bell Telephone Co. and spent the next year in Europe, studying German and German literature in Germany and French and French history and literature in France, and devoting much time to travel in the various countries. In 1883 he purchased a farm at East Braintree, Mass., but soon lost interest in agriculture and returned to mechanical pursuits. In 1885 he organized the Fore River Engine Co. and began to manufacture marine engines in sizes suitable for yachts and tug boats. After this enterprise was successfully established he delegated his work to others and turned his attention to the study of human speech, which he pursued extensively for years, and later, with his wife, took a two-year course in geology at Lowell institute in Boston, which was followed by a three-year course in geology, paleontology and other related sciences at the Massachusetts institute of technology. In his scientific field investigations he made a number of minor discoveries in the geology of eastern Massachusetts, notably a number of limestone boulders filled with fossils, near Boston. Meanwhile the Fore River Engine Co., of which he was president and treasurer, had continued to grow and prosper, and in 1897 began a new stage of development by obtaining contracts to build two destroyers, the "Lawrence" and "Macdonough," for the U.S. navy. Two years later the company was awarded contracts for the construction of a lightship for Cape Hatteras, N.C., and an unarmored cruiser, the "Des Moines," and Watson purchased a 100-acre site at Quincy Point, on which he began the construction of a ship-building plant capable of constructing vessels as large as any afloat. In 1901 the Fore River Engine Co. was succeeded by the Fore River Ship & Engine Co., capitalized at $6,500,000 and with Watson as its president. The first contract obtained by the new company was for the construction of two U.S. battleships, the "Rhode Island" and "New Jersey." The next was for a seven-mast steel schooner, the "Thomas W. Lawson," the largest schooner ever built and the only vessel with seven masts in maritime history. Other important contracts were received and the Fore River Ship & Engine Co. grew rapidly into one of the largest ship-building corporations in America. Watson lost control of the company in 1903, after using up practically his entire fortune in financing it, and resigned as its president but for several months thereafter served as chairman of the board of directors. For many years he took an active interest in civic affairs at East Braintree and was especially prominent in educational matters. He established the first kindergarten there, founded the People's Institute, which sponsored public entertainments and lectures, served for many years as chairman of the school board, and became the leader of a group of writers, artists, poets, mechanics and business men, calling themselves "nationalists," which sought to promote public ownership and operation of all industries. As a result of the activities of this group the Massachusetts legislature passed a law permitting municipalities to own and operate their electric lighting systems and under its authority an electric light plant was built at Braintree by a committee of which Watson was chairman. Later he became manager of the plant. The activities of his later years included mining and geological investigations on the Pacific coast and in Alaska, cultural studies, public lectures and readings of poems and plays, and travel at home and abroad. While in Great Britain in 1910 he became an actor, making an extended tour of England and Scotland with the Benson players. Later he dramatized three Dickens' novels, "The Tale of Two Cities," "Nicholas Nickleby" and "Oliver Twist," which were produced by another company in many cities in England, with Watson playing in leading rôles. In 1915 he participated in the opening of the transcontinental telephone, talking from San Francisco with Alexander Graham Bell in New York city, the latter repeating, through an exact duplicate of the first telephone Watson had built, the historic words, "Mr. Watson, come here, I want you." Watson was elected a fellow of the American Institute of Electrical Engineers in 1919 and in the same year was awarded an A.M. degree by Union college, Schenectady, N.Y. In 1921 he received the degree of D.Eng. from Stevens institute of technology and that of Sc.D. from the University of New Hampshire. He was the author of "Exploring Life," his autobiography (1926), besides many articles on the history of telephony. He was a member of the American Association for the Advancement of Science, Boston Society of Natural History, Boston Browning Society, Essex Institute and Massachusetts Horticultural Society. He was married Sept. 5, 1882, to Elizabeth Seaver, daughter of Peter C. Kimball, of Cohasset, Mass., and they had four children: Thomas Bell; Helen, wife of Dr. Milton C. Winternitz; Ralph Kimball, and Esther Watson, wife of Albert N. Tipple. He died at St. Petersburg, Fla., Dec. 13, 1934.

SEDGWICK, Arthur George, lawyer and journalist, was born in New York city, Oct. 6, 1844, son of Theodore and Sarah (Ashburner). Sedg-